

EXHIBIT F

Exhibit F**Infringement of U.S. Patent No. 8,792,008 by DISH Accused Satellite Television Services**

#	U.S. Patent No. 8,792,008	DISH Accused Satellite Television Services
3a	A method comprising:	<p>The Accused Satellite Television Services perform the claimed method utilizing, for example, monitoring devices such as the Hopper 3. By way of example, the Hopper 3 is charted herein.</p> <p>Your new Hopper® 3 receiver is a Whole-Home HD DVR that offers full digital video recording functionality, including pausing live TV, to every TV in your house that is part of your Whole-Home DVR system. The Hopper 3 receiver is the hub for all things entertainment. It is an HD DVR that provides the equivalent of 16 tuners, allowing you to record multiple HD channels at once and at any time and play them back in any room in your home.</p>
3b	performing by one or more circuits:	The Hopper 3 has one or more circuits as described below:

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#	U.S. Patent No. 8,792,008	DISH Accused Satellite Television Services
		
3c	receiving a signal having a bandwidth that spans from a first frequency, F_{lo} , to a second frequency, F_{hi} , wherein said signal carries a plurality of channels;	The Hopper 3 receives a signal having a bandwidth that spans from a first frequency, F_{lo} , to a second frequency, F_{hi} , wherein said signal carries a plurality of channels as described below:

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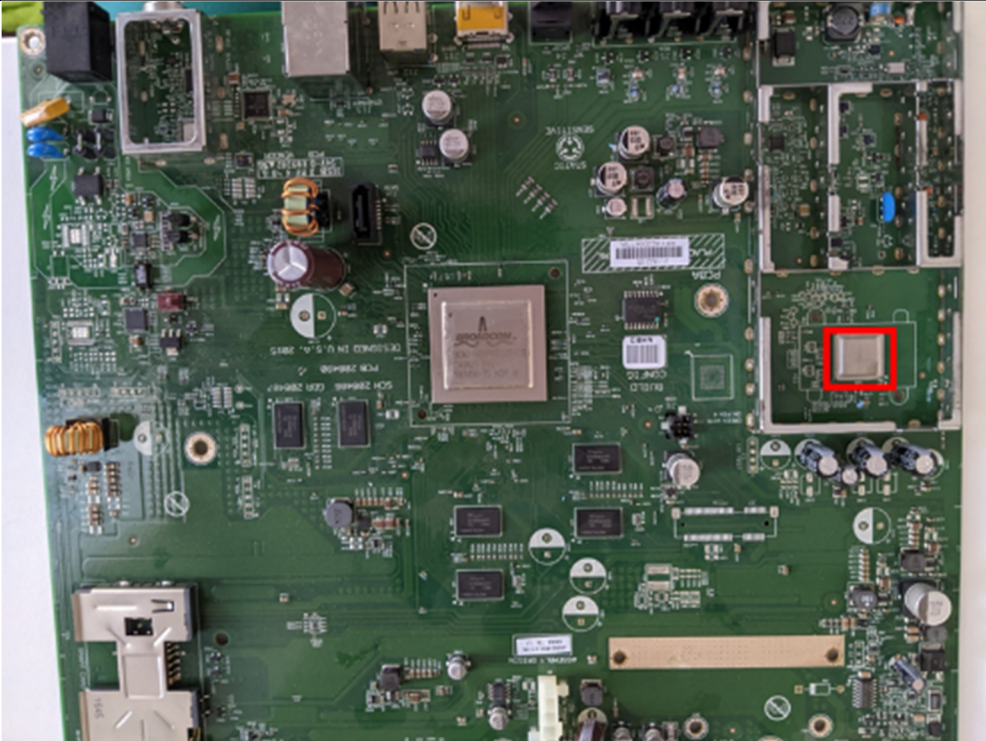
#	U.S. Patent No. 8,792,008	DISH Accused Satellite Television Services
		<div data-bbox="716 235 1696 971"></div> <div data-bbox="716 1019 1528 1279"><ul style="list-style-type: none">• All-digital satellite receiver<ul style="list-style-type: none">- 256-kilobaud to 30-megabaud variable rate receiver- Supports BPSK, QPSK, 8PSK, & 16QAM modulation- Dual integrated 7-bit A/D converters- Digital square-root Nyquist filters ($\alpha=0.2, 0.35$)- All-digital clock and carrier recovery- 12-tap adaptive equalizer</div>

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		<p>Technology Advantages:</p> <ul style="list-style-type: none"> • <u>Drives future TV</u>: leapfrogs current analog architecture by moving to digital and supporting up to 24 minimally spaced channels; opens up the ability to stream independent HD broadcast streams and IP services from a single cable to multiple connected devices, delivering next-generation satellite TV. • <u>Simplifies installation and upgrades</u>: Broadcom's stacked channel technology allows single cable installation, which significantly reduces the cost and complexity for installs and upgrades with better home theater aesthetics for subscribers. • <u>Full-Band Capture (FBC)</u>: Broadcom's digital tuning technology digitizes the entire spectrum enabling more efficient and flexible distribution of video streams and IP services. • <u>Lower system cost</u>: replaces multiple analog ODU chips with a single lower cost mixed signal chip.
3e	selecting a first portion of said digitized signal;	<p>The Hopper 3 selects a first portion of said digitized signal as described below:</p> <p>Your new Hopper® 3 receiver is a Whole-Home HD DVR that offers full digital video recording functionality, including pausing live TV, to every TV in your house that is part of your Whole-Home DVR system. The Hopper 3 receiver is the hub for all things entertainment. It is an HD DVR that provides the equivalent of 16 tuners, allowing you to record multiple HD channels at once and at any time and play them back in any room in your home.</p>
3f	selecting a second portion of said digitized signal; and	<p>The Hopper 3 selects a second portion of said digitized signal as described below:</p> <p>Your new Hopper® 3 receiver is a Whole-Home HD DVR that offers full digital video recording functionality, including pausing live TV, to every TV in your house that is part of your Whole-Home DVR system. The Hopper 3 receiver is the hub for all things entertainment. It is an HD DVR that provides the equivalent of 16 tuners, allowing you to record multiple HD channels at once and at any time and play them back in any room in your home.</p>

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3g	concurrently outputting said selected first portion and said selected second portion, wherein:	<p>The Hopper 3 concurrently outputs said selected first portion and said selected second portion as described below:</p> <p>Your new Hopper® 3 receiver is a Whole-Home HD DVR that offers full digital video recording functionality, including pausing live TV, to every TV in your house that is part of your Whole-Home DVR system. The Hopper 3 receiver is the hub for all things entertainment. It is an HD DVR that provides the equivalent of 16 tuners, allowing you to record multiple HD channels at once and at any time and play them back in any room in your home.</p>
3h	said selected first portion is output to a signal analyzer which analyzes said selected first portion to determine one or more characteristics of the received signal, and which reports said determined one or more characteristics to a source of said received signal; and	<p>The Hopper 3 outputs said selected first portion to a signal analyzer which analyzes said selected first portion to determine one or more characteristics of the received signal, and which reports said determined one or more characteristics to a source of said received signal as described below:</p>

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#	U.S. Patent No. 8,792,008	DISH Accused Satellite Television Services
		<p data-bbox="804 256 1140 378">Audio/Video Output High-quality standard-definition connection to the TV audio and video input</p> <p data-bbox="1270 256 1491 402">Digital Audio Optical connection to a high-quality digital sound decoding system</p> <p data-bbox="1591 272 1843 402">Remote Antenna Connects to a UHF-2G remote control antenna</p>  <p data-bbox="751 605 951 833">YPbPr/Component Output Optional connection to your high-definition TV video input</p> <p data-bbox="982 621 1213 743">HDMI® Output Provides high-definition digital audio and video to the TV</p> <p data-bbox="1245 621 1423 800">USB Ports Connects to multimedia devices, such as an external hard drive</p> <p data-bbox="1465 621 1644 743">Ethernet Connects to a broadband home network</p> <p data-bbox="1686 621 1885 711">Phone Jack Connects to a telephone line</p> <p data-bbox="730 898 951 930">Receiver Tests</p> <p data-bbox="772 963 1654 1019">The Customer Service Representative may ask you to access the Diagnostics screen. Remember to have an active phone line or broadband Internet connected to your receiver.</p> <p data-bbox="730 1044 1633 1133">1 Press the MENU button, select the Settings tile, then Network Setup, and then Tests. The Network Setup Tests screen contains various tests that a DISH Customer Service Representative may ask you to initiate for your receiver:</p> <ul data-bbox="772 1141 1654 1403" style="list-style-type: none"> • Test Connection: Tests for a valid receiver telephone connection. • Call Out: If "No Dial Out Pending" is displayed, the receiver does not need to have its smart card records updated. • View Counters: Shows you a list of diagnostic counters. Use PAGE UP and PAGE DOWN to scroll through the list of counters displayed, if applicable. • Send Status: Sends data about your system to DISH for analysis. This should be performed only as directed by a DISH Customer Service Representative. • HDMI: Select an available HDMI connection analysis from the list and test data will be displayed on the right. Tests should be performed as directed by DISH instructions.

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3i	<p>said selected second portion is output to a data processor for recovery of data carried on one or more of said plurality of channels.</p>	<p>The Hopper 3 outputs said selected second portion to a data processor for recovery of data carried on one or more of said plurality of channels as described below:</p> 

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		<p>Key Features of the Broadcom® BCM7445 Ultra HD SoC</p> <ul style="list-style-type: none"> • Brahma15 21,000 DMIP CPU, four 1080p30 real-time transcoders and HEVC compression • Delivers resolution up to 4096 x 2160p60 • Web domain security, an industry leading hardware security oversight to separate Internet services from premium broadcast content • Simultaneously delivers four transcoded HD video streams over IP for content on any screen <p>Your new Hopper® 3 receiver is a Whole-Home HD DVR that offers full digital video recording functionality, including pausing live TV, to every TV in your house that is part of your Whole-Home DVR system. The Hopper 3 receiver is the hub for all things entertainment. It is an HD DVR that provides the equivalent of 16 tuners, allowing you to record multiple HD channels at once and at any time and play them back in any room in your home.</p>
7a	The method of claim 3, wherein:	See above.
7b	said received signal is a satellite television signal output by a low noise block downconverter; and	Said received signal is a satellite television signal output by a low noise block downconverter as described below:

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#	U.S. Patent No. 8,792,008	DISH Accused Satellite Television Services
		<p>part of your Whole-Home DVR system. The Hopper 3 receiver is the hub for all things entertainment. It is an HD DVR that provides the equivalent of 16 tuners, allowing you to record multiple HD channels at once and at any time and play them back in any room in your home.</p> <p>Joey® receivers (Joey®, SuperJoey®, Wireless Joey®, 4K Joey™) connect to other TVs in your home and link to the Hopper 3 system, creating a Whole-Home DVR network. It supports all of the features of the Hopper 3 (with the exception of Picture-In-Picture) and offers an identical user interface as the Hopper 3. You can connect a Joey receiver to a high-definition or standard-definition TV.</p>
10	The method of claim 3, wherein a bandwidth and/or center frequency of said selected first portion is configurable during operation of said one or more circuits.	Upon information and belief, the Hopper 3 configurably selects a bandwidth and/or center frequency of the selected first portion of the digitized signal.